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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,969	01/15/2002	Yousuke Moriuchi	026575-065	2991

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EXAMINER

EREZO, DARWIN P

ART UNIT	PAPER NUMBER
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3731

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/044,969

Applicant(s)

MORIUCHI ET AL.

Examiner

Darwin P. Erez

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/27/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,7 and 16-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,7 and 16-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's argument, filed on 1/27/07, regarding the Jang reference failing to teach a plurality of waves positioned between portions of a single one of the waved elements has been fully considered and is persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ainsworth et al.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 6, 16-19, 22 and 24-28 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,616,689 to Ainsworth et al.

(claim 1) Ainsworth discloses an expandable stent having:

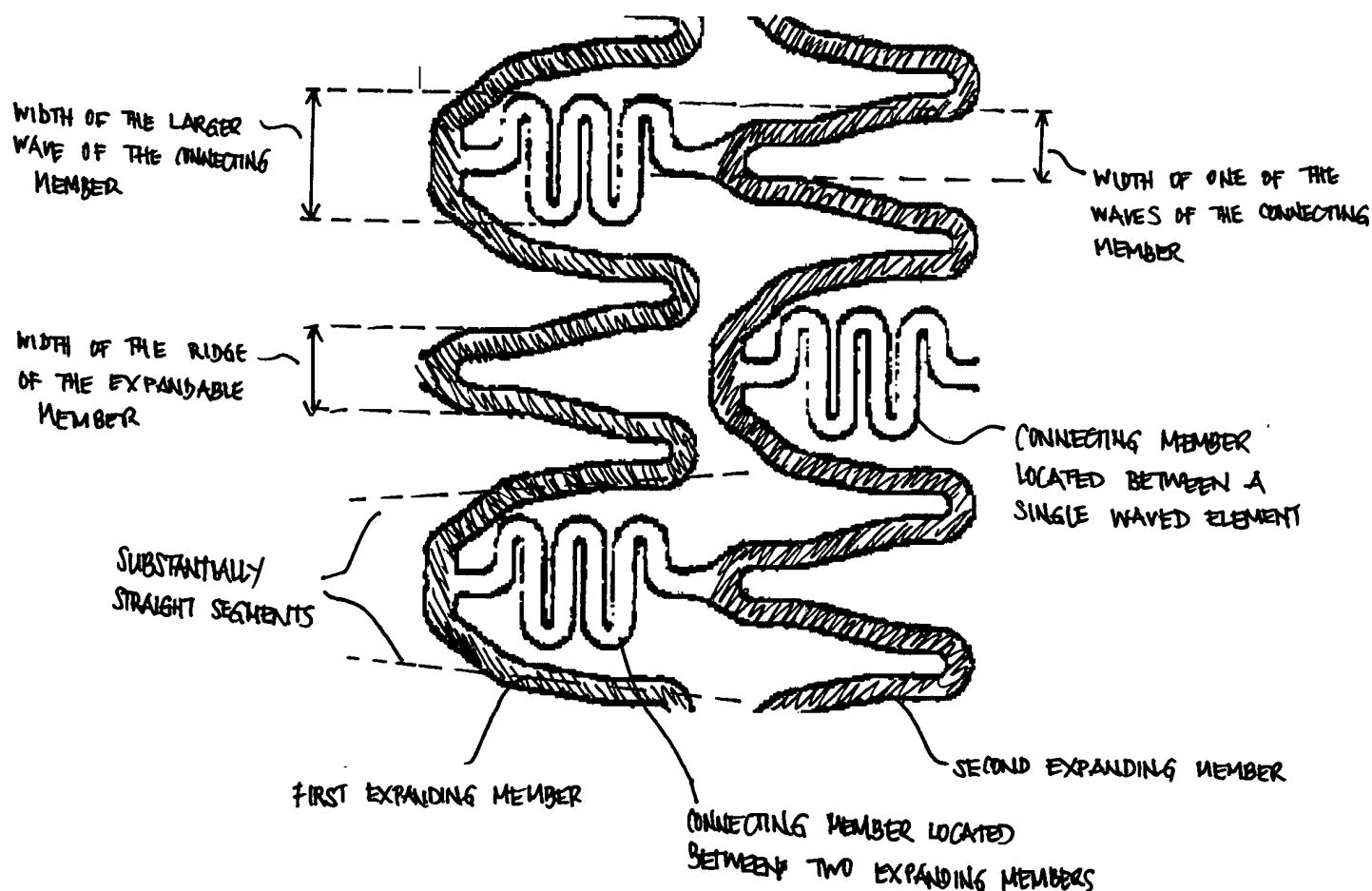
a plurality of annular expanding members arranged a predetermined distance apart from each other in an axial direction of the stent and forming a waved element (see attached figure); and

a plurality of waved connecting members connecting ridges/bottoms of the waved elements (see attached figure);

wherein the plurality of annular expanding members are arranged in an axial direction of the stent such that no substantial phase difference exists in the waves of the waved elements,

wherein each of the waved connecting members has a plurality of waves including a wave formed in the clearance between adjacent annular expanding members and having an amplitude larger than that of the other wave, the largest wave having a height measured circumferentially of the stent, the wave height of the largest wave being larger than the width of the ridge (see attached figure), and

wherein the plurality of waves comprising each waved connecting members includes a plurality of waves positioned between the waved elements.



Art Unit: 3731

(claim 2) The ridges depicted above are connected to adjacent ridges. It could also be viewed as the bottoms of the expanding members are connected to each other.

(claim 6) The total length of the connecting member is more than 1.3 times the distance between the ridges (see figure above).

(claim 16) The waved connecting member have at least three waves (see attached figure above).

(claims 17 and 26) See the rejection to claim 1 and the following: Ainsworth also discloses the expanding members having a plurality of substantially straight segments; wherein the connecting member comprises a wave that is larger than that of another wave of the connecting member; and wherein a plurality of waves are positioned between the substantially linear segments of the first or any of the expanding members.

(claims 18, 19, 27 and 28) See the rejection to claim 2.

(claim 22) See the rejection to claim 16.

(claims 24 and 25) Ainsworth discloses more than two annular expanding elements, each having the same structure as cited in the independent claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 4, 20, 21, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ainsworth et al. and in view of US 6,113,627 to Jang.

Ainsworth discloses all the limitations of the claims except for the connecting members having a width that is not larger than $\frac{1}{2}$ of the width of the waved element, or any specific recitation of the width of each of the waves connecting members falling within the range of 0.03-0.08 mm. However, Jang discloses a similar stent structure having connecting members that appear to be $\frac{1}{2}$ the width of the expanding members (see last Office action). The smaller width of the connecting members provide additional flexibility to the stent structure. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the connecting members of Ainsworth to have a width that is less than $\frac{1}{2}$ the width of the expanding members because it would provide additional flexibility to the stent structure. This is beneficial if the stent structure is to be deployed in a tortuous vessel. With regards to the range limitation of 0.03-0.08 mm, it would have been obvious to arrive said limitation because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

6. Claims 7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ainsworth et al.

Ainsworth discloses all the limitations of the claims except for the width of the clearance between adjacent annular expanding members falling within the range of 0.4-0.8mm. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the width of the clearance between adjacent annular expanding members falling within the range of 0.4-0.8mm, since it has been

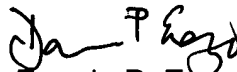
held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darwin P. Erezzo whose telephone number is (571) 272-4695. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan T. Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Darwin P. Erezzo
Examiner
Art Unit 3731